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EXAMINER	
MOSLEHI, FARHOOD	

ART UNIT	PAPER NUMBER
2154	6

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

A24

Office Action Summary	Application No.	Applicant(s)	
	09/781,007	WEBB, BRANDYN	
	Examiner	Art Unit	
	Farhood Moslehi	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-26 are presented for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1,3,4,10,11,13,14,16,17,23,24,26,27 and 28 are rejected under 35 U.S.C. 102(a) as being anticipated by Leach et al. (6,108,715) (hereinafter Leach).

4. As per claim 1, Leach teaches a computer-implemented data processing method, comprising: running a first process in a first address space and a second process in a second address space, the first process including a request to send to the second process data having a data type (e.g. col. 5, lines 16-30); calling at runtime a type creation function to create a first type object describing the data type, the first type object having a set of associated functions for processing data, the set of associated functions including a marshalling function for encoding data and an unmarshalling function for decoding data executing the marshalling function in the first process to generate encoded data the marshalling function executed in the first process taking as input the data and the first type object (e.g. col. 2, lines 45-56); communicating the encoded data to the second process; and executing the unmarshalling function on the

encoded data to decode the encoded data in the second process (e.g. col. 11, lines 30-60).

5. As per claim 13, it is rejected for similar reason as stated above.

6. As per claim 14, it is rejected for similar reason as stated above.

7. As per claim 26, it is rejected for similar reasons as stated above.

8. As per claim 3, Leach shows the method wherein the data type is an array type, an integer type, a pointer type, a real type, a string type or a structure type (e.g. col. 2, lines 24-32).

9. As per claim 16, it is rejected for similar reasons as stated above.

10. As per claim 4, Leach shows the method wherein the first type object is a parameterized type object including an element identifying a location in memory, the parameterized type object describing a format for the data type based on one or more type parameters in the identified location (e.g. col. 7, lines 54-67 & col. 6, lines 1-20).

11. As per claim 17, it is rejected for similar reasons as stated above.

12. As per claim 10, Leach shows the method whwrein: the type creation function is called in the first process to create a first instance of the first type object and in the second process to create a second instance of the first type object (e.g. col. 2, lines 38-57).

13. As per claim 23, it is rejected for similar reasons as stated above.

14. As per claim 11, Leach shows the method wherein: the data has a first format in the first process (e.g. col. 7, lines 54-59); and the encoded data is decoded in the

second process to generate data having a second format, the second format being different than the first format (e.g. col. 7, lines 54-67).

15. As per claim 24, it is rejected for similar reasons as stated above.

16. As per claim 27, Leach teaches the marshalling function executing in the first process sends the encoded data to the second process (e.g. col. 2, lines 50-54).

17. As per claim 28, it is rejected for similar reasons as stated above.

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

19. Claims 2 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leach in view of Biliris et al. (5,590,327) (hereinafter Biliris).

20. As per claim 2, Leach does not specifically discuss the method wherein the set of associated functions for processing data having the data type includes a print function for printing data having the data type. Biliris clearly shows the method wherein the set of associated functions for processing data having the data type includes a print function for printing data having the data type (e.g. col. 5, lines 50-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Leach with Biliris. The motivation would have been to include a printing function in the associated function list.

21. As per claim 15, it is rejected for similar reasons as stated above.

22. Claims 5 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leach in view of Peterson (5,504,901).

23. As per claim 5, Leach does not show the method wherein the element identifying a location in memory is an offset element identifying a location in memory relative to data. Peterson clearly shows the method wherein the element identifying a location in memory is an offset element identifying a location in memory relative to data (e.g. col. 4, lines 35-49). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Leach with Peterson. The motivation would have been to separate the data from the processes with a known quantity in order to know the relative position of data at all time.

24. As per claim 18, it is rejected for similar reasons as stated above.

25. Claim 6, 7, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leach in view of Peterson as applied to claim 5 above, and further in view of Hunt (6,381,735).

26. As per claim 6, Leach combined with Peterson do not specifically show the method wherein the parameterized type object describes a dynamically sized array and the type parameters include data specifying a size of the dynamically sized array. Hunt the method wherein the parameterized type object describes a dynamically sized array and the type parameters include data specifying a size of the dynamically sized array (e.g. col. 10, 17-39). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Leach, Peterson and Hunt. The motivation would have been to be able to control the size of arrays with a method.

27. As per claim 19, it is rejected for similar reasons as stated above.

28: As per claim 7, Leach combined with Peterson do not show the method wherein the parameterized type object describes a dynamically typed pointer and the type parameters include data identifying a second type object. Hunt shows the method wherein the parameterized type object describes a dynamically typed pointer and the type parameters include data identifying a second type object (e.g. col. 3, lines 59-62).). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Leach, Peterson and Hunt. The motivation would have been to access different objects through methods, as operations on objects are needed.

29. As per claim 20, it is rejected for similar reasons as stated above.

30. Claims 8 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leach as applied to claim 1 above, in view of Atkinson et al. (6,263,379) (hereinafter Atkinson), and further in view of Reekes et al. (5,592,588) (hereinafter Reekes).

31. As per claim 8, Leach does not specifically show the method wherein: the set of associated functions includes a type description function operable to generate a type object description describing the first type object; the encoded data includes an encoded representation of the type object description; and executing the unmarshalling function to decode the encoded data includes reconstructing the data in the second address space based on the type object description. Atkinson shows the set of associated functions includes a type description function operable to generate a type object description describing the first type object (e.g. col. 77, lines 38-64); executing the unmarshalling function to decode the encoded data includes reconstructing the data

in the second address space based on the type object description (e.g. col. 78, lines 1-10); Reekes shows the encoded data includes an encoded representation of the type object description (e.g. col. 13, lines 48-54). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Leach, Atkinson and Reekes. The motivation would have been for all coding and decoding to occur based on object description. This would enable the units to be self-describing.

32. As per claim 21, it is rejected for similar reasons as stated above.

33. Claims 9 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leach in view of Doong et al. (6,336,148) (hereinafter Doong).

34. As per claim 9, Leach does not specifically show the method wherein: the first type object has a set of properties including a limitation condition specifying a limitation on permissible values for data having the data type; and executing the unmarshalling function to decode the encoded data includes returning an error message if the data violates the limitation condition. Doong shows the method wherein: the first type object has a set of properties including a limitation condition specifying a limitation on permissible values for data having the data type (e.g. col.5 lines 38-43); and executing the unmarshalling function to decode the encoded data includes returning an error message if the data violates the limitation condition (e.g. col. 5, lines 38-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Leach with Doong. The motivation would have been to notify the system of error messages to take corrective actions.

35. As per claim 22, it is rejected for similar reasons as stated above.

36. Claims 12 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leach in view of Stadler et al. (5,838,971) (hereinafter Stadler).

37. As per claim 12, Leach does not specifically show the method wherein: the encoded data is generated in a format that is independent of the first and second formats. Stadler clearly shows the method wherein: the encoded data is generated in a format that is independent of the first and second formats (e.g. col. 6, lines 1-16). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Leach with Stadler. The motivation would have been to have an independent format so that the format of the data could be changed for compatibility with different systems.

38. As per claim 25, it is rejected for similar reasons as stated above.

39. Applicant's arguments filed 3-05-2004 have been fully considered but are not persuasive.

40. In the remarks, applicants argued in substance that (1) Leach does not disclose or suggest calling a type function at runtime to create a type object that is input to a marshalling function.

41. As to point (1) Leach shows two processes invoking the real object's function members. Moreover, Leach discusses the client process creates a proxy object that represents the real object. The proxy object contains methods with the same signature as the real object (e.g. col. 2, lines 45-57 and Figure 2).

42. In the remarks, applicants argued in substance that (2) Atkinson does not disclose or suggest including an encoded representation of a type object description in encoded data.

43. As to point (2) Atkinson shows the Marshalling flags along with their types that will be encoded in the data (e.g. col. 77, col. 45-60. The table includes the argument and the data type). Moreover Atkinson further describes the root level function by which an interface pointer can be marshaled into a stream which clearly has a data type (e.g col. 76, lines 15-26).

44. In the remarks, applicants argued in substance that (3) Reekes does not disclose or suggest including in encoded data an encoded representation of a type object description.

45. As to point (3), Reekes shows the type of the object in the typedef struct and Reekes discusses the componentType field is set to a value recognized by the SPS (e.g. col. 13, lines 35-45).

Conclusion

46. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farhood Moslehi whose telephone number is 703-305-8646. The examiner can normally be reached on M-F 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 703-305-8498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

fm

ZARNI MAUNG
PRIMARY EXAMINER